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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,437	03/20/2001	Dagnachew Birru	US010069	9839
24737	7590	07/19/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			DEPPE, BETSY LEE	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/812,437

Applicant(s)

BIRRU, DAGNACHEW

Examiner

Betsy L. Deppe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16 and 19 is/are rejected.
- 7) ☒ Claim(s) 12-15 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 and 20 March 2001 is/are: a) ☒ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the communications filed May 13, 2005.

Drawings

2. The drawings were received on May 13, 2005. These drawings are accepted.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the encoder in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. The claims are objected to because of the following informalities:

in claim 12, line 6, "said first digital level value" should be "said first discrete digital level value" (see claim 12, line 5);

in claim 17, line 2, "a filter output result" should be "a filter result" in order to be consistent with "said stored filter result" in claim 17, line 3;

in claim 17, line 3, it appears that "said filter" should be "said filter unit" (see claim 12, line 2); and

in claim 18, lines 10-11, "of one said further intermediate result" should be "of one of said further intermediate results."

The respective dependent claims are objected to for the same reason.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. With regard to claims 1-11, the detailed description, as originally filed, does not describe a second sub-multiplication circuit that simultaneously receives the first intermediate result as recited claim 1, lines 13-14. It appears that "a first sub multiplication circuit" corresponds to 54 and 64 and "a second sub multiplication circuit" corresponds to 56 and 66 in Figure 3. Figure 3 does not show 56 or 66 receiving a signal from 54 or 64. It appears that "said first intermediate result" on lines 13-14 should be "said filter coefficient" in order to be consistent with the specification as originally filed.

8. With regard to claim 11, the detailed description, as originally filed, does not describe a first discrete digital level value as being an error signal. For example, claim 2 as originally filed associates discrete digital level values with a given integer but the originally filed specification does not associate the discrete level value with the error signal.

9. Claims 11 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

10. In claim 11, it is unclear how the error value is implemented as a discrete digital level value for use by the multiplier device. Furthermore, the specification does not describe how the error signal in Figure 1 is used by the multiplier device in Figure 3.

11. In claim 16, it is unclear how steps b) and c) are performed simultaneously (as recited in claim 16) when step c) uses the first and second intermediate output results provided by step b) (see claim 12, lines 12-13 which recites effecting a multiplication of one of the first and second intermediate results that are generated in b)).

12. Claims 1-11 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. With regard to claims 1-11, it is unclear what is meant by "simultaneously receiving said first intermediate result" in claim 1, lines 13-14, since the first intermediate result must be generated before it can be received by the second sub multiplication circuit."

14. In claim 4, it is unclear what is meant by "define" on line 2. How does the sub-multiplication circuit relate to the inverter circuit?

15. In claim 5, it is unclear what is meant by "defines" on line 2. How does the multiplier device relate to the inverter circuits?

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16. Claim 19 recites the limitation "said different discrete level values" in line 5.

There is insufficient antecedent basis for this limitation in the claim. Claim 18, line 11 recites one different "discrete level value."

Allowable Subject Matter

17. Claims 12-15, 17 and 18 are allowable.

18. The following is a statement of reasons for the indication of allowable subject matter: prior art of record does not teach or suggests in combination a method for performing multiplication that includes the shifting and adding steps recited in claim 12, lines 12-16. Furthermore, prior art of record does not teach or suggests in combination a multiplier device comprised of the logic circuit and accumulator device as recited in claim 18, lines 10-14.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose multiplier devices and multiplication methods: Corletto et al. (US Patent No. 5,001,661); Anderson et al. (US Patent No. 5,220,525); Nagamatsu (US Patent No. 5,226,003) and Jong et al. (US Patent No. 6,035,319).

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betsy L. Deppe
Primary Examiner
Art Unit 2637

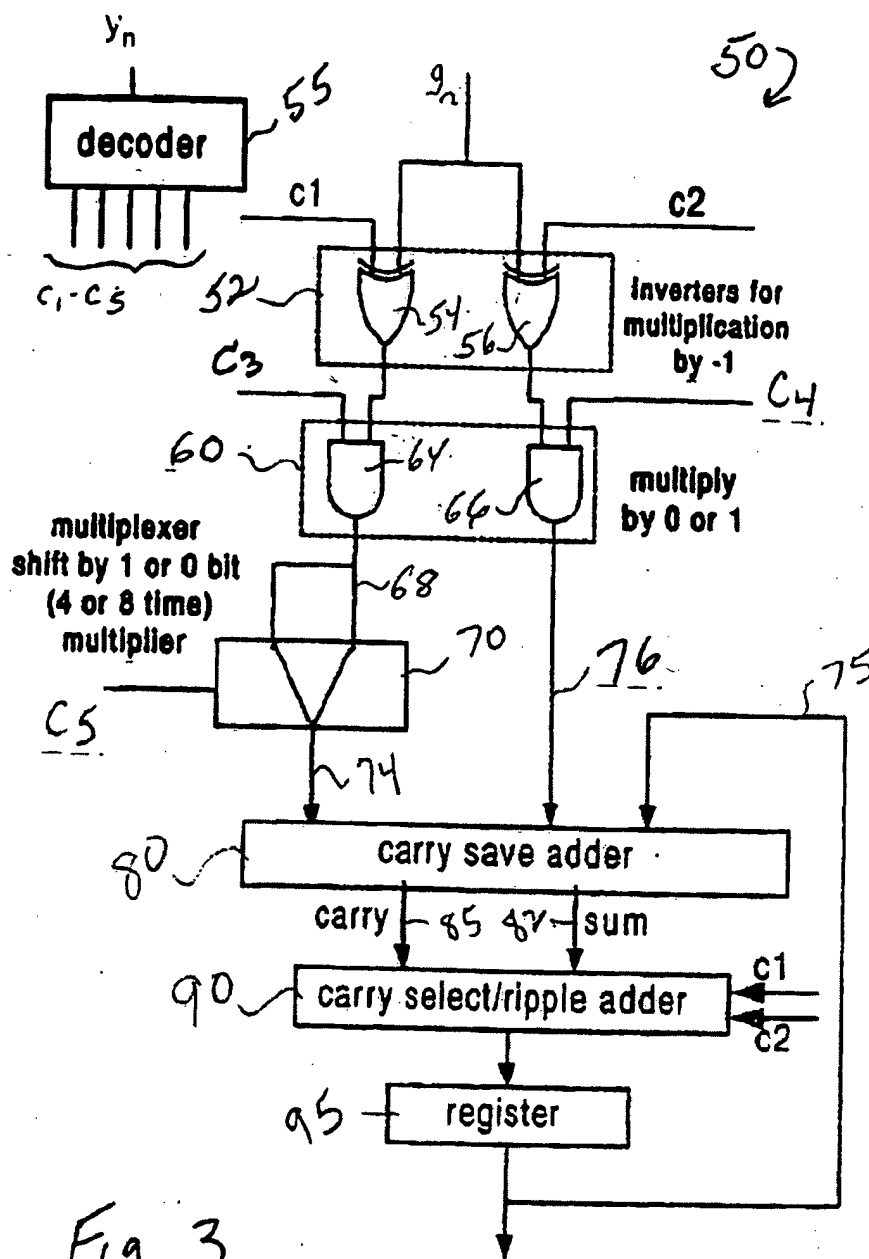


Fig. 3